

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-34. (Canceled)

35. (Previously Presented) A recombinant DNA comprising a polynucleotide of claim 47, which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

36-38. (Canceled)

39. (Currently Amended) A method for producing ~~2-hydroxyisoflavone~~ 2-hydroxyisoflavanone synthase comprising culturing a host cell that contains a recombinant DNA according to claim 35.

40-46. (Canceled)

47. (Currently Amended) An isolated polynucleotide ~~having a~~ having at least one of (a) a nucleic acid sequence that codes for the protein of SEQ ID NO:2, or a or for a variant of said protein that catalyzes the synthesis of 2-hydroxyisoflavanone from flavanone in leguminous plants, or a complementary polynucleotide thereto. (b) the nucleotide sequence complementary to said nucleic acid sequence,

wherein said variant differs from SEQ ID NO:2 in that 1 to 20 amino acids have been substituted.

48. (Currently Amended) The isolated polynucleotide of claim 47, having at least one of (a) a nucleotide sequence which codes for SEQ ID NO:2, or a polynucleotide (b) the nucleotide sequence complementary thereto.

49. (Currently Amended) The isolated polynucleotide of claim 47, having at least one of (a) the sequence of nucleotides 144 - 1712 of SEQ ID NO:1, or a polynucleotide (b) the nucleotide sequence complementary thereto.

50. (Currently Amended) ~~The isolated~~ An isolated polynucleotide having at least one of (a) the sequence of SEQ ID NO:1, or a polynucleotide (b) the nucleotide sequence complementary thereto.

51. (Currently Amended) The isolated polynucleotide of claim 47, which codes for the protein of SEQ ID NO:2, ~~or a~~ or for a variant of said protein that catalyzes the synthesis of 2-hydroxyisoflavanone from flavanone in leguminous plants.

52. (Previously Presented) The isolated polynucleotide of claim 48, which codes for SEQ ID NO:2.

53. (Previously Presented) The polynucleotide of claim 49, having the sequence of nucleotides 144 - 1712 of SEQ ID NO:1.

54. (Previously Presented) The polynucleotide of claim 50, having the sequence of SEQ ID NO:1.

55. (Canceled)

56. (Currently Amended) The isolated polynucleotide of claim 47, wherein ~~in~~ said variant differs from SEQ ID NO:2 in that 1 to 10 amino acids ~~of SEQ ID NO:2~~ have been substituted, ~~deleted or added~~.

57. (Currently Amended) The isolated polynucleotide of claim 47, wherein ~~in~~ said variant differs from SEQ ID NO:2 in that 1 to 5 amino acids ~~of SEQ ID NO:2~~ have been substituted, ~~deleted or added~~.

58. (Canceled)

59. (Currently Amended) The isolated polynucleotide of claim ~~58~~ 47, wherein the variant contains 1 to 20 amino acid substitutions selected from the group consisting of between any one of Ala, Val, Leu and Ile, between Ser and Thr, between Asp and Glu, between Asn and Gln, between Lys and Arg and between Phe and Tyr.

60. (Currently Amended) An isolated polynucleotide comprising at least one of (a) a nucleic acid sequence encoding ~~2-hydroxyisoflavone~~ 2-hydroxyisoflavanone synthase, said nucleic acid sequence having at least ~~70%~~ 95% homology to nucleotides 144-1712 of SEQ ID NO:1, ~~and (b) a or (b) the~~ complement of said nucleic acid sequence.

61-63. (Canceled)

64. (Previously Presented) The polynucleotide of claim 60, said nucleic acid sequence having nucleotides 144-1712 of SEQ ID NO:1.

65. (Previously Presented) A recombinant DNA comprising a polynucleotide of claim 60, which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

66. (Currently Amended) A method for producing ~~2-hydroxyisoflavone~~ 2-hydroxyisoflavanone synthase comprising culturing a host cell that contains a recombinant DNA according to claim 65.

67. (Currently Amended) A recombinant DNA comprising a polynucleotide of ~~claim 47, claim 50,~~ which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

68. (Currently Amended) A method for producing ~~2-hydroxyisoflavone~~ 2-hydroxyisoflavanone synthase comprising culturing a host cell that contains a recombinant DNA according to claim 67.

69. (New) An isolated polynucleotide having at least one of (a) a nucleic acid sequence that codes for the protein of SEQ ID NO:2, or for a variant of said protein that catalyzes the synthesis of 2-hydroxyisoflavanone from flavanone in leguminous plants, or (b) the nucleotide sequence complementary to said nucleic acid sequence,

wherein said nucleic acid sequence is a naturally-occurring sequence, and

wherein said variant differs from SEQ ID NO:2 in that 1 to 20 amino acids have been substituted, deleted or added.

70. (New) An isolated polynucleotide comprising at least one of (a) a nucleic acid sequence encoding 2-hydroxyisoflavanone synthase, said nucleic acid sequence having at least 70% homology to nucleotides 144-1712 of SEQ ID NO:1, or (b) the complement of said nucleic acid sequence, wherein said nucleic acid sequence is a naturally-occurring sequence.

71. (New) The polynucleotide of claim 70, said nucleic acid sequence having at least 80% homology to nucleotides 144-1712 of SEQ ID NO:1.

72. (New) The polynucleotide of claim 70, said nucleic acid sequence having at least 90% homology to nucleotides 144-1712 of SEQ ID NO:1.

73. (New) An isolated polynucleotide having at least one of (a) a nucleic acid sequence that codes for the protein of SEQ ID NO:2, or for a natural variant of said protein that catalyzes the synthesis of 2-hydroxyisoflavanone from flavanone in leguminous plants or (b) the nucleotide sequence complementary to said nucleic acid sequence.

74. (New) The isolated polynucleotide of claim 73, wherein said variant differs from SEQ ID NO:2 in that 1 to 20 amino acids have been substituted, deleted or added.

75. (New) The isolated polynucleotide of claim 73, wherein said nucleic acid sequence has at least 70% homology to nucleotides 14-1712 of SEQ ID NO:1.

76. (New) A recombinant DNA comprising a polynucleotide of claim 73, which is connected to a regulation sequence that will express the polynucleotide in a sense direction.

77. (New) A method for producing 2-hydroxyisoflavanone synthase comprising culturing a host cell that contains a recombinant DNA according to claim 76.

78. (New) The isolated polynucleotide of claim 73, wherein said variant differs from SEQ ID NO:2 in that 1 to 20 amino acids have been substituted.

79. (New) The isolated polynucleotide of claim 73, wherein said nucleic acid sequence has at least 95% homology to nucleotides 14-1712 of SEQ ID NO:1.